

Montana Natural Heritage Program
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Plant Species of Special Concern

June, 1997

Introduction

The Montana Natural Heritage Program (MTNHP) maintains an inventory of the elements of biological diversity in Montana, including plant species, animal species, and plant communities that are known or suspected to be rare, endemic, disjunct, threatened, or endangered throughout their range or in Montana, or in need of further research.

The list of 346 vascular plant species of special concern and the list of 111 moss taxa and one lichen of special concern in Montana summarizes current status and county distribution. The lists have been developed from numerous sources, including published and unpublished scientific literature, herbarium specimens, the Rare Plant Project (Lesica *et al.* 1984), knowledgeable persons, a variety of cooperating agencies and organizations, and MTNHP field research.

These lists are periodically revised as new data becomes available. Changes since the most recent edition (Heidel 1996) are underlined for quick reference. New additions to the state flora--discoveries, annotations, taxonomic revisions, and obscure references--are in **bold and underlined**. Printed revisions are produced annually, while periodic updates will be available from our office or via our home page at <http://nr.is.mt.gov/mtnhp>.

The publication *Sensitive, threatened and endangered vascular plants of Montana* (Lesica and Shelly 1991) provides supplemental details on habitat, phenology, distribution on public lands, and other species information. Work is underway to expand and update this publication, including the addition of illustrations and maps, and posting this information on our home page.

Comments and suggestions on list contents are invited, particularly regarding recommended additions or deletions. New location information for any of these taxa is also being solicited. MTNHP can supply current location information and status data for most of these taxa.

Information requests can be placed by calling or writing MTNHP at the above address, via e-mail at mtnhp@nr.is.mt.gov, or through the World Wide Web at <http://nr.is.mt.gov/mtnhp> (follow the link for Information Requests).

Heritage Program Ranks

Taxa are evaluated and ranked by the Heritage Program on the basis of their global (range-wide) status, and their state-wide status according to a standardized procedure used by all Natural Heritage Programs (The Nature Conservancy 1992). These ranks are used to determine protection and data collection priorities, and are revised as new information becomes available.

For each level of distribution—global and state—species are assigned a numeric rank ranging from 1 (critically imperiled) to 5 (demonstrably secure). This reflects the species' relative endangerment and is based primarily on the number of occurrences of that species globally or within the state. However, other information such as date of collection, degree of habitat threat, geographic distribution patterns and population size and trends is considered when assigning a rank, and the number of occurrences listed below are suggestions, not absolute criteria.

For example, Clustered lady's-slipper (*Cypripedium fasciculatum*) is ranked G4 S2. That is, globally the species is apparently secure, while in Montana it is imperiled because of rarity, or because of other factors making it demonstrably vulnerable to extirpation.

Rank Definition

- | | |
|---|---|
| 1 | Critically imperiled because of extreme rarity (5 or fewer occurrences, or very few remaining individuals), or because of some factor of its biology making it especially vulnerable to extinction. |
|---|---|

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Heritage Program Ranks (continued)

Rank	Definition
2	Imperiled because of rarity (6 to 20 occurrences), or because of other factors demonstrably making it very vulnerable to extinction throughout its range.
3	Vulnerable because of rarity (21 to 100 occurrences) or found in a restricted range (even abundantly at some of its locations) in a restricted range.
4	Apparently secure, though it may be quite rare in parts of its range, especially at the periphery.
5	Demonstrably secure, though it may be quite rare in parts of its range, especially at the periphery.
U	Possibly in peril, but status uncertain; more information needed.
H	Historical, known only from records over 50 year ago; may be rediscovered.
X	Believed to be extinct; historical records only.

Other Heritage Codes

G#G# Numeric range rank: A range between two of the numeric ranks. Denotes range of uncertainty about the exact rarity of the species.

Subrank

T Rank for subspecific taxon (subspecies or variety); appended to the global rank for the full species, e.g. G4T3.

Qualifiers

Q Taxonomic questions or problems involved, more information needed; appended to the global rank, e.g. G3Q.

? Inexact or uncertain: for numeric ranks, denotes inexactness.

Fish and Wildlife Service Status

The symbols in this column denote the categories defined in the U.S. Fish and Wildlife Service Notice of Review (1980, 1983, 1985, 1990, 1993, 1996) and indicate the status of a taxon under the federal Endangered Species Act of 1973 (16 U.S.C.A. § 1531-1543 (Supp. 1996)).

LE	listed endangered (none in Montana)
LT	listed threatened (two in Montana)
P	proposed endangered or threatened (none in Montana)

C candidate--substantial information exists in U.S. Fish and Wildlife Service files on biological vulnerability to support proposals to list as endangered or threatened (**none in Montana**)

Note: *Species previously recognized as C2, 3B and 3C are no longer tracked by the USFWS (61 FR 7596, Feb. 28, 1996).*

Forest Service Status

The status of species on Forest Service lands as defined by the U.S. Forest Service Manual (2670.22). These taxa are listed as such by the Regional Forester (Northern Region) on National Forests in Montana.

E	listed as Endangered (LE) by USFWS
T	listed as Threatened (LT) by USFWS
S	sensitive species, subspecies or variety, for which the Regional Forester has determined there is a concern for population viability within the state, as evidenced by a significant current or predicted downward trend in populations or habitat.
PS	taxon was recommended for consideration as sensitive at the 1995 or 1997 Montana Rare Plant Conference.
W	watch species--species that are recognized by Forest Supervisors which are either not known to occur on national forest land but predicted to occur there on the basis of suitable habitat, or known to occur on national forest land but with no immediate or predicted threats to population viability.

Bureau of Land Management Status

The status of species on Bureau of Land Management Lands as defined by the BLM 6840 Manual; designated by the Montana State Office of the BLM in 1996.

S	sensitive species--proven to be imperiled in at least part of its range and documented to occur on BLM lands.
W	watch species--either known to be imperiled and suspected to occur on BLM lands; suspected to be imperiled and documented on BLM lands; or needing further study for other reasons.

County Distribution

Counties in which a species occurs are indicated by the first four letters of the county name, except Yellowstone National Park which is designated by YNPK. Distribution information reflects records in the Heritage Program's database at the time of the list update. These can include county records that are historic, extirpated, or unmappable.

Range Notes

Taxa which are globally restricted to an area less than half the size of Montana are noted in this column as either state or regional endemics.

SE state endemic

RE regional endemic, endemic species with range that extends beyond the state boundaries

Changes from the May, 1996 List

Additions and deletions to the state list are the result of changes in either our knowledge of the species or new information on distribution and/or population size.

Additions

Vascular Plants

Botrychium campestre
Botrychium pedunculatum
Carex chalciolepis
Carex nelsonii
Carex norvegica ssp. *inserrulata*
Carex vaginata
Eriogonum visheri
Lycopodium siichense

Bryophytes

Didymodon rigidulus var. *gracilis*
Entosthodon rubiginosus
Herzogiella striatella
Hypnum callichroum
Leucolepis acanthoneuron
Phascum cuspidatum
Physomitrium pyriforme
Pseudocrossidium obtusulum
Pterygoneurum lamellatum
Pterygoneurum subsessile
Racomitrium brevipes
Racomitrium pygmaeum
Sphagnum wulfianum
Tortula bartramii

Deletions

Vascular Plants

Aster simplex var. *ramosissimus*
Bidens vulgata var. *schizantha*
Carex eburnea
Chrysopsis depressa (*Heterotheca depressa*)
Cuscuta pentagona
Eleocharis xyridiformis
Erigeron bellidiastrum
Erigeron flabellifolius
Erigeron flagellaris
Eriogonum lagopus
Eriophorum viridicarinum
Evax prolifera

Gilia inconspicua
Helenium hoopesii
Ligusticum porteri
Lilium columbianum
Machaeranthera commixta
Madia minima
Mimulus glabratus var. *fremontii*
Oryzopsis contracta
Papaver pygmaeum
Pedicularis contorta var. *rubicunda*
Polygonum polygaloides
Scirpus pendulus
Spiraea x pyramidata
Trisetum x orthochaetum

Selected References

- Dorn, R. D. 1984. Vascular Plants of Montana. Mountain West Publishing, Cheyenne, WY. 276 pp.
- Heidel, B. L. 1996. Montana plant species of special concern. [Unpublished list.] Montana Natural Heritage Program, Helena. 31 pp.
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- Lesica, P. and J. S. Shelly. 1991. Sensitive, threatened and endangered vascular plants of Montana. Montana Natural Heritage Program, Montana State Library, Helena, Montana
- The Nature Conservancy, Conservation Science Division, in association with the Network of Natural Heritage Programs and Conservation Data Centers. October 1992. Biological and Conservation Data System (Supplement 2+, released March, 1994). Arlington, Virginia.
- U.S. Fish and Wildlife Service. 1996. Notice of Review of Plant and Animal Taxa for Listing as Endangered and Threatened Species. 61 FR 7596, February 28, 1996.
- U.S. Fish and Wildlife Service. 1993. Endangered and threatened wildlife and plants. 50 CFR 17.11 & 17.12, August 23, 1993. U. S. Govt. Printing Office: 1993-342-477/94033. 40 pp.

More Information

Extensive additional information, including location data, is available on most species listed here. MTNHP serves as a clearinghouse for information on species of special concern in the state, and each year responds to hundreds of data requests.

The preferred citation for this document is:

Heidel, B. 1997. Montana plant species of special concern. [Unpublished list.] Montana Natural Heritage Program, Helena. 34 pp.

Vascular Plant Species of Special Concern, June 1997

Scientific Name Common Name	Family	Global Rank	State Rank	FWS Status	FS Status	BLM Status	County Distribution	Range Notes
<i>Adoxa moschatellina</i> Musk-root	Adoxaceae	G5	S1		S	W	Gran, Jeff, Stil	
<i>Agastache cusickii</i> Cusick's Horse-mint	Lamiaceae	G3G4	S1		PS	S	Beav	
<i>Agoseris lackschewitzii</i> Pink Agoseris	Asteraceae	G4	<u>S3</u>		S		Beav, Carb, Casc, Deer, Gran, Judi, Madi, Meag, Park, Silv, Sweet	RE
<i>Agrostis borealis</i> Northern Bentgrass	Poaceae	G5	S2				Miss, Rava	
<i>Allium acuminatum</i> Tapertip Onion	Liliaceae	G5	S1		S		Madi, Rava, Sand	
<i>Allium columbianum</i> Columbia Onion	Liliaceae	G3	<u>S1</u>				Sand	
<i>Allium fibrillum</i> Fringed Onion	Liliaceae	G4	S2		S		Flat, Glac, Linc, Miss, Pond	RE
<i>Allium parvum</i> Dwarf Onion	Liliaceae	G5	S2				Rava	
<i>Allium simillimum</i> Dwarf Onion	Liliaceae	G4	S1				Gall, Rava	RE
<i>Allotropa virgata</i> Candystick	Monotropaceae	G4	<u>S3</u>		S		Beav, Deer, Gran, Rava	
<i>Amerorchis rotundifolia</i> Round-leaved Orchis	Orchidaceae	G5	S2S3		S	W	Flat, Glac, Lewi, Linc, Pond, Powe, Teto	
<i>Ammannia coccinea</i> Scarlet Ammannia	Lythraceae	G5	S1				Garf, Phil	
<i>Amorpha canescens</i> Lead Plant	Fabaceae	G5	SH				Cart, Rose	
<i>Antennaria densifolia</i> Dense-leaved Antennaria	Asteraceae	G3	S1		S		Deer, Gran	
<i>Aquilegia brevistyla</i> Short-styled Columbine	Ranunculaceae	G5	S2		S		Judi, Sweet	

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Scientific Name Common Name	Family	Global Rank	State Rank	FWS Status	FS Status	BLM Status	County Distribution	Range Notes
<i>Aquilegia formosa</i> Sitka Columbine	Ranunculaceae	G5	S1				Beav	
<i>Arabis demissa</i> var <i>languida</i> Daggett Rock Cress	Brassicaceae	G5T3	S1			W	Carb	
<i>Arabis fecunda</i> Sapphire Rockcress	Brassicaceae	G2	S2		S	S	Beav, Rava, Silv	SE
<i>Arabis lyrata</i> var <i>kamchatica</i> Lyre-leaf Rockcress	Brassicaceae	G5T5?	S1				Flat	
<i>Arctostaphylos patula</i> Green-leaf Manzanita	Ericaceae	G4	S1				Lake, Sand	
<i>Artemisia norvegica</i> var <i>saxatilis</i> Boreal Wormwood	Asteraceae	G5T?	SH				Glac	
<i>Asclepias incarnata</i> Swamp Milkweed	Asclepiadaceae	G5	S1				Carb, Fall	
<i>Asclepias ovalifolia</i> Ovalleaf Milkweed	Asclepiadaceae	G5?	S1			W	Cart	
<i>Asclepias stenophylla</i> Narrowleaf Milkweed	Asclepiadaceae	G4G5	S1			W	Cart, Rose	
<i>Asplenium trichomanes</i> Maidenhair Spleenwort	Aspleniaceae	G5	<u>SX</u>		S	W	Flat	
<i>Aster frondosus</i> Alkali Aster	Asteraceae	G4	S1				Sand	
<i>Aster glaucodes</i> Gray Aster	Asteraceae	G3G4	S1				Carb	
<i>Astragalus aretioides</i> Sweetwater Milkvetch	Fabaceae	G4	S2			W	BigH, Carb	RE
<i>Astragalus barrii</i> Barr's Milkvetch	Fabaceae	G3	S3		S	W	BigH, Cart, Powd, Rose	RE
<i>Astragalus ceramicus</i> var <i>apus</i> Painted Milkvetch	Fabaceae	G4T3	S1			S	Beav	

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<i>Astragalus convallarius</i> Lesser Rushy Milkvetch	Fabaceae	G5T5	S2			W	Beav, Broa, Lewi	
<i>Astragalus geyeri</i> Geyer's Milkvetch	Fabaceae	G3G4T3T4	S2				Carb, Cust, Daws, Garf	
<i>Astragalus grayi</i> Gray's Milkvetch	Fabaceae	G4?	S1				Carb	RE
<i>Astragalus molybdenus</i> Leadville Milkvetch	Fabaceae	G3	S2		S		Teto	RE
<i>Astragalus oregonus</i> Wind River Milkvetch	Fabaceae	G4?	S1			W	Carb	RE
<i>Astragalus racemosus</i> Raceme Milkvetch	Fabaceae	G5T4	S1			W	Cart, Fall	
<i>Astragalus scaphoides</i> Bitterroot Milkvetch	Fabaceae	G3	S2		PS	S	Beav	RE
<i>Astragalus terminalis</i> Railhead Milkvetch	Fabaceae	G3G4	S2			S	Beav, Madi	RE
<i>Athysanus pusillus</i> Sandweed	Brassicaceae	G4	S1		S		Rava	
<i>Atriplex truncata</i> Wedge-leaved Saltbush	Chenopodiaceae	G5	S1			W	Beav, Lake, Lewi	
<i>Bacopa rotundifolia</i> Roundleaf Water-hyssop	Scrophulariaceae	G5	S1			W	Casc, Ferg, Garf, Phil	
<i>Balsamorhiza macrophylla</i> Large-leaved Balsamroot	Asteraceae	G3G5	S1		S	W	Beav, Gall, Madi	
<i>Bidens beckii</i> Beck Water-marigold	Asteraceae	G4G5TU	S2				Flat, Lake, Miss	
<i>Bidens comosa</i> Threelobed Beggarticks	Asteraceae	G5	S1			W	Chou, Hill, Rich	
<i>Boisduvalia densiflora</i> Dense Spike-primrose	Onagraceae	G5	SH				Sand	

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Scientific Name Common Name	Family	Global Rank	State Rank	FWS Status	FS Status	BLM Status	County Distribution	Range Notes
<i>Botrychium ascendens</i> Upward-lobed Moonwort	Ophioglossaceae	G3?	S1		S		Flat, Lewi, Linc	
<u><i>Botrychium campestre</i></u> Prairie Dunewort	Ophioglossaceae	<u>G3</u>	<u>S1</u>					
<i>Botrychium crenulatum</i> Wavy Moonwort	Ophioglossaceae	G3	S2		S		Flat, Lake, Linc, Sand	
<i>Botrychium hesperium</i> Western Moonwort	Ophioglossaceae	G3	S1		S		Deer, Flat, Glac	
<i>Botrychium lineare</i> Linearleaf Moonwort	Ophioglossaceae	G1	S1				Lake	
<i>Botrychium minganense</i> Mingan Island Moonwort	Ophioglossaceae	G4	<u>S3</u>		S		Casc, Flat, Glac, Gran, Lake, Linc, Miss, Pond, Sand, Teto	
<i>Botrychium montanum</i> Mountain Moonwort	Ophioglossaceae	G3	S2		S		Flat, Lake, Linc, Sand	
<i>Botrychium paradoxum</i> Peculiar Moonwort	Ophioglossaceae	G2	S1		S		Deer, Flat, Glac, Gran, Linc, Pond, Teto	
<u><i>Botrychium pedunculosum</i></u> Stalked Moonwort	Ophioglossaceae	<u>G3?</u>	<u>S1</u>				Linc	
<i>Botrychium spathulatum</i> Spoon-leaf Moonwort	Ophioglossaceae	G3G4	S1		PS		Lake	
<i>Brasenia schreberi</i> Watershield	Cabombaceae	G5	S2				Flat, Lake, Linc, Miss	
<i>Braya humilis</i> Low Braya	Brassicaceae	G4	S1				Beav	
<i>Calamagrostis tweedyi</i> Cascade Reedgrass	Poaceae	G3	S2				Mine, Miss, Rava, Sand	RE
<i>Calochortus bruneauensis</i> Bruneau Mariposa Lily	Liliaceae	G5	<u>SH</u>				Beav	
<i>Camissonia andina</i> Obscure Evening-primrose	Onagraceae	G4	S1			S	Carb, Miss, Rava	

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<i>Camissonia parvula</i> Small Camissonia	Onagraceae	G4	S1			S	Carb	
<i>Cardamine oligosperma</i> var <i>kamtschatica</i> Few-seeded Bittercress	Brassicaceae	G5T?	S1				Flat	
<i>Carex amplifolia</i> Big-leaf Sedge	Cyperaceae	G4	S1				Sand	
<i>Carex chalciolepis</i> Copper-scale Sedge	Cyperaceae	<u>G5T?</u>	<u>S1</u>					
<i>Carex chordorrhiza</i> Creeping Sedge	Cyperaceae	G5	<u>S2</u>		S		Flat, Linc, Powe	
<i>Carex comosa</i> Bristly Sedge	Cyperaceae	G5	S1				Flat	
<i>Carex crawei</i> Craw's Sedge	Cyperaceae	G5	S2			S	Casc, Pond, Powe, PRAI, Teto	
<i>Carex gravida</i> Pregnant Sedge	Cyperaceae	G5T?	S1			W	BigH, Powd, Rose	
<i>Carex incurviformis</i> var <i>incurviformis</i> Maritime Sedge	Cyperaceae	G4G5T?	S1				Deer, Glac, Teto	
<i>Carex lenticularis</i> var <i>dolia</i> Goose-grass Sedge	Cyperaceae	G5T2Q	S1		W		Flat, Glac	RE
<i>Carex livida</i> Pale Sedge	Cyperaceae	G5	<u>S3</u>		S		Flat, Glac, Lake, Lewi, Miss, Powe, Teto	
<i>Carex multicostrata</i> Many-ribbed Sedge	Cyperaceae	G5	S1			W	Beav, Gall, Park	
<i>Carex nelsonii</i> Nelson's Sedge	Cyperaceae	<u>G3</u>	<u>S1</u>					
<i>Carex neuophora</i> Alpine-nerved Sedge	Cyperaceae	G4	S2				Deer, Gran, Madi, Miss, Park, Rava	
<i>Carex norvegica</i> ssp <i>inserrulata</i> Toothed Scandinavian Sedge	Cyperaceae	<u>G5T?Q</u>	<u>S1</u>					

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<i>Carex norvegica</i> ssp <i>stevenii</i> Steven's Scandinavian Sedge	Cyperaceae	G5T?	<u>S1</u>					
<i>Carex occidentalis</i> Western Sedge	Cyperaceae	G4	SH			W	Beav	
<i>Carex parryana</i> ssp <i>idaho</i> Idaho Sedge	Cyperaceae	G4T2	S2		S	S	Beav, Silv	RE
<i>Carex paupercula</i> Poor Sedge	Cyperaceae	G5T5	<u>S3</u>		S		Flat, Lake, Linc, Miss, Rava, Teto	
<i>Carex petricosa</i> Rock Sedge	Cyperaceae	G4	S1				Glac	
<i>Carex prairea</i> Prairie Sedge	Cyperaceae	G5?	S1				Flat	
<i>Carex rostrata</i> Beaked Sedge	Cyperaceae	G5	S1				Flat	
<i>Carex scoparia</i> Pointed Broom Sedge	Cyperaceae	G5	S1				Miss, Rava	
<i>Carex stenoptila</i> Small-winged Sedge	Cyperaceae	G3?	S1				Flat, Rava, YNPK	
<i>Carex sychnocephala</i> Many-headed Sedge	Cyperaceae	G4	S1				Casc, Glac, Lake, Linc, Sher	
<i>Carex tenuiflora</i> Thin-flowered Sedge	Cyperaceae	G5	S1				Flat	
<i>Carex tinctoria</i> Slender Sedge	Cyperaceae	G4G5	SU				Glac, Lake, Park	RE
<i>Carex vaginata</i> Sheathed Sedge	Cyperaceae	<u>G5</u>	<u>S1</u>					
<i>Castilleja cervina</i> Deer Indian Paintbrush	Scrophulariaceae	G3G4	S1				Flat, Miss, Powe	RE
<i>Castilleja covilleana</i> Coville Indian Paintbrush	Scrophulariaceae	G3G4	S2		S		Rava	RE

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<i>Castilleja exilis</i> Annual Indian Paintbrush	Scrophulariaceae	G5	S2				Deer, Gall, Jeff, Madi, Park	
<i>Castilleja gracillima</i> Slender Indian Paintbrush	Scrophulariaceae	G3G4	S2		S	W	Gall, Madi, Park, YNPK	RE
<i>Ceanothus herbaceus</i> var <i>pubescens</i> New Jersey Tea	Rhamnaceae	G5T?	SH			W	Powd	
<i>Celastrus scandens</i> Bittersweet	Celastraceae	G5	S1			W	Daws	
<i>Centaurium exaltatum</i> Western Centaury	Gentianaceae	G5	SH				BigH	
<i>Centunculus minimus</i> Chaffweed	Primulaceae	G5	S1			W	Casc, Lake, Miss, Rava	
<i>Cercocarpus montanus</i> var <i>glaber</i> Birchleaf Mountain-mahogany	Rosaceae	G5TU	S1			W	Trea	
<i>Chenopodium subglabrum</i> Smooth Goosefoot	Chenopodiaceae	G3	S1			W	Cart, Casc, Cust	
<i>Chrysosplenium tetrandrum</i> Northern Golden-carpet	Saxifragaceae	G5	S3				Gran, Rava	
<i>Chrysothamnus parryi</i> ssp <i>montanus</i> Centennial Rabbitbrush	Asteraceae	G5T1	S1		S		Beav	RE
<i>Cirsium brevistylum</i> Short-styled Thistle	Asteraceae	G4	S1				Flat, Mine, Sand	
<i>Cirsium longistylum</i> Long-styled Thistle	Asteraceae	G2Q	S2				Broa, Casc, Jeff, Judi, Lewi, Meag, Whea	SE
<i>Clarkia rhomboidea</i> Common Clarkia	Onagraceae	G4	S2		S		Linc, Sand	
<i>Claytonia arenicola</i> Sand Springbeauty	Portulacaceae	G4	S1				Sand	
<i>Cleome lutea</i> Yellow Bee Plant	Capparaceae	G5	S1			W	BigH, Carb	

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<i>Collomia tinctoria</i> Yellow-staining Collomia	Polemoniaceae	G5	S1				Casc, Flat, Lake, Rava	
<i>Conioselinum scopulorum</i> Hemlock Parsley	Apiaceae	G4	S1			W	BigH, Carb	
<i>Corydalis sempervirens</i> Pale Corydalis	Fumariaceae	G4G5	S1				Flat, Glac, Linc	
<i>Cryptantha fendleri</i> Fendler Cat's-eye	Boraginaceae	G4	S1			W	Beav, Sher	
<i>Cryptantha flavoculata</i> Pale Yellow Cryptantha	Boraginaceae	G5	S1				Carb	
<i>Cryptantha humilis</i> Cryptantha	Boraginaceae	G4?	SU			W		
<i>Cryptantha scoparia</i> Miner's Candle	Boraginaceae	G4	S1			S	Carb	
<i>Cyperus acuminatus</i> Short-pointed Flatsedge	Cyperaceae	G5	S1			W	Casc, Cust, Sand	
<i>Cyperus erythrorhizos</i> Red-root Flatsedge	Cyperaceae	G5	<u>SH</u>				Flat, Miss	
<i>Cyperus rivularis</i> Shining Flatsedge	Cyperaceae	G5	S1				Miss, Rava	
<i>Cyperus schweinitzii</i> Schweinitz' Flatsedge	Cyperaceae	G5	S1			W	Cart, Casc, Cust, Sher	
<i>Cypripedium fasciculatum</i> Clustered Lady's-slipper	Orchidaceae	G4	S2		S		Lake, Mine, Sand	
<i>Cypripedium parviflorum</i> Small Yellow Lady's-slipper	Orchidaceae	G5	S2S3		S	W	Flat, Gall, Gran, Judi, Lake, Lewi, Linc, Miss, Park, Stil, Sweet, Teto	
<i>Cypripedium passerinum</i> Sparrow's-egg Lady's-slipper	Orchidaceae	G4G5	S2		S		Flat, Lake, Lewi, Linc, Pond, Powe, Teto	
<i>Cystopteris montana</i> Mountain Bladder Fern	Dryopteridaceae	G5	SH				Glac	

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<i>Dalea emeandra</i> Nine-anther Dalea	Fabaceae	G5	S1			W	Cust, Rich	
<i>Dalea villosa</i> Silky Prairie Clover	Fabaceae	G5T?	S1			W	Cart	
<i>Dichanthelium oligosanthes</i> var <i>scribnerianum</i> Scribner's Panic Grass	Poaceae	G5T5	S1			W	Lake, Powd	
<i>Downingia laeta</i> Great Basin Downingia	Campanulaceae	G5	S1			W	Beav, Lewi, Madi, Teto	
<i>Draba densifolia</i> Dense-leaf Draba	Brassicaceae	G5	S2				Glac, Jeff, Lewi, Park, Silv	
<i>Draba fladnizensis</i> White Arctic Draba	Brassicaceae	G4	S1				Carb, Deer	
<i>Draba globosa</i> Round-fruited Draba	Brassicaceae	G3G4	S1			W	Beav, Madi	RE
<i>Draba macounii</i> Macoun's Draba	Brassicaceae	G3	S1				Flat, Glac	
<i>Draba porsildii</i> Porsild's Draba	Brassicaceae	G3	S1				Carb	
<i>Draba ventosa</i> Wind River Draba	Brassicaceae	G3	S1				Beav, Madi	RE
<i>Drosera anglica</i> English Sundew	Droseraceae	G5	S2				Flat, Gall, Lake, Lewi, Linc, Madi, Miss, Powe, Rava	
<i>Drosera linearis</i> Linear-leaved Sundew	Droseraceae	G4	S1		S		Flat, Lewi, Powe	
<i>Dryas integrifolia</i> Entire-leaved Avens	Rosaceae	G5	S1				Ferg, Gold, Madi	
<i>Dryopteris cristata</i> Buckler Fern	Dryopteridaceae	G5	S2		S		Flat, Lake, Miss, Rava	
<i>Elatine brachysperma</i> Short-seeded Water-wort	Elatinaceae	G5	SU				Gall, Miss	

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<i>Elatine californica</i> California Waterwort	Elatinaceae	G5	SU				Casc, Lake	
<i>Eleocharis rostellata</i> Beaked Spikerush	Cyperaceae	G5	S2			W	Carb, Flat, Lake, Madi, Sand, Teto	
<i>Elodea longivaginata</i> Long Sheath Waterweed	Hydrocharitaceae	G4G5	S1			W	Glac, Libe, Phil	
<i>Elymus flavescens</i> Sand Wildrye	Poaceae	G4	S1			S	Beav, Madi	
<i>Elymus innovatus</i> Northern Wild-rye	Poaceae	G5	S1		S		Casc, Glac, Pond	
<i>Epipactis gigantea</i> Giant Helleborine	Orchidaceae	G4	S2		S	W	Carb, Casc, Flat, Gran, Lake, Madi, Powe, Teto	
<i>Erigeron asperugineus</i> Idaho Fleabane	Asteraceae	G4	S1		S	W	Beav, Madi, Rava	RE
<i>Erigeron eatonii</i> ssp <i>eatonii</i> Eaton's Daisy	Asteraceae	G5T5	S1		W		Flat, Swee	
<i>Erigeron evermannii</i> Evermann Fleabane	Asteraceae	G4	S1		S		Rava	RE
<i>Erigeron formosissimus</i> var <i>viscidus</i> Beautiful Fleabane	Asteraceae	G5T4	S1			W	Carb, Madi, Park	
<i>Erigeron lackschewitzii</i> Front Range Fleabane	Asteraceae	G5T3	S3		PS		Flat, Lewi, Pond, Teto	RE
<i>Erigeron leiomerus</i> Smooth Fleabane	Asteraceae	G4	S1				Beav, Madi	
<i>Erigeron linearis</i> Linearleaf Fleabane	Asteraceae	G5	S1		S		Beav, Rava	
<i>Eriogonum caespitosum</i> Mat Buckwheat	Polygonaceae	G5	S1				Beav	
<i>Eriogonum salsuginosum</i> Smooth Buckwheat	Polygonaceae	G4?	S1			S	Carb	

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<i>Eriogonum visheri</i> Visher's Buckwheat	Polygonaceae	G3	S1		S			
<i>Eriophorum callitrix</i> Sheathed Cotton-grass	Cyperaceae	G5	S1				Carb	
<i>Eriophorum gracile</i> Slender Cottongrass	Cyperaceae	G5	SU		PS		Flat, Lake, Linc	
<i>Eupatorium maculatum</i> Joe-pye Weed	Asteraceae	G5TU	S1			W	BigH, Carb	
<i>Eupatorium occidentale</i> Western Boneset	Asteraceae	G4	S1		S		Mine, Rava	
<i>Euphrasia arctica</i> var <i>disjuncta</i> Disjunct Eyebright	Scrophulariaceae	G5	S1				Glac	
<i>Eustoma grandiflorum</i> Showy Prairie-gentian	Gentianaceae	G5	S1			W	McCo	
<i>Festuca vivipara</i> Viviparous Fescue	Poaceae	G4G5Q	S2				Flat, Glac	
<i>Gentiana glauca</i> Glaucous Gentian	Gentianaceae	G4G5	S1				Flat	
<i>Gentiana prostrata</i> Pygmy Gentian	Gentianaceae	G5	S2				Beav, Carb, Deer, Glac, Stil	
<i>Gentianella tenella</i> Slender Gentian	Gentianaceae	G4G5	S2				Carb, Madi, Park, Stil	
<i>Gentianopsis macounii</i> Macoun's Gentian	Gentianaceae	G5	S1		PS		Glac, Teto	
<i>Gentianopsis simplex</i> Hiker's Gentian	Gentianaceae	G4	S1		S	W	Beav, Carb, Miss	
<i>Glossopetalon nevadense</i> Spiny Greenbush	Crossosomataceae	G5?Q	S1		S		Rava	
<i>Goodyera repens</i> Northern Rattlesnake-plantain	Orchidaceae	G5	S3		S		Ferg, Flat, Judi, Meag, Whea	

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<i>Gratiola ebracteata</i> Bractless Hedge-hyssop	Scrophulariaceae	G4	S1				Casc, Glac, Teto, Yell	
<i>Grayia spinosa</i> Spiny Hopsage	Chenopodiaceae	G5	<u>S2</u>			W	Beav, BigH, Carb	
<i>Grindelia howellii</i> Howell's Gum-weed	Asteraceae	G3	S2S3		S		Miss, Powe	RE
<i>Gymnosteris parvula</i> Small-flower Gymnosteris	Polemoniaceae	G4	SH				Gall	
<i>Halenia deflexa</i> Spurred Gentian	Gentianaceae	G5TU	S2		PS		Flat, Linc	
<i>Halimolobos perplexa</i> var <i>lemhiensis</i> Puzzling Rockcress	Brassicaceae	G4T4	S1		S		Rava	SE
<i>Haplopappus aberrans</i> Idaho Golden-weed	Asteraceae	G3	S1		S		Rava	RE
<i>Haplopappus carthamoides</i> var <i>subsquarrosus</i> Beartooth Large-flowered Goldenweed	Asteraceae	G4G5T2T3	S2			W	Carb	RE
<i>Haplopappus macronema</i> var <i>macronema</i> Discoid Goldenweed	Asteraceae	G4G5T4	S1		S		Beav, Gall	
<i>Haplopappus nanus</i> Dwarf Goldenweed	Asteraceae	G5	S1				Beav	
<i>Haplopappus pygmaeus</i> Pygmy Goldenweed	Asteraceae	G4	SH				Deer, Gall	
<i>Helenium hoopesii</i> Orange Sneezeweed	Asteraceae	G5	SU				Beav	
<i>Hemicarpha drummondii</i> Drummond's Hemicarpha	Cyperaceae	G4G5	<u>SH</u>				Carb	
<i>Heteranthera dubia</i> Water Star-grass	Pontederiaceae	G5	S1				Flat, Sand	
<i>Heterocodon rariflorum</i> Western Pearl-flower	Campanulaceae	G5	S1				Lake, Rava, Sand	

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<i>Howellia aquatilis</i> Water Howellia	Campanulaceae	G2	S2	LT	T		Lake, Miss	
<i>Hutchinsia procumbens</i> Hutchinsia	Brassicaceae	G5	S1			W	Beav, Powe	
<i>Idahoia scapigera</i> Scalegod	Brassicaceae	G5	S1		S		Rava	
<i>Ipomopsis congesta</i> ssp <i>crebrifolia</i> Ballhead Gillia	Polemoniaceae	G5T3	S2				Beav	RE
<i>Ipomopsis minitiflora</i> Small-flower Standing-cypress	Polemoniaceae	G2G3	S1				Rava	
<i>Juncus acuminatus</i> Tapered Rush	Juncaceae	G5	S1				Teto	
<i>Juncus albens</i> Three-flowered Rush	Juncaceae	G5	S2				Flat, Glac, Park	
<i>Juncus covillei</i> var <i>covillei</i> Coville's Rush	Juncaceae	G4G5T5	SU				Mine, Miss, Rava	
<i>Juncus covillei</i> var <i>obtusatus</i> Coville's Rush	Juncaceae	G4G5T4	SU					
<i>Juncus hallii</i> Hall's Rush	Juncaceae	G4G5	S2		S		Beav, Madi, Meag, Powe, Silv	
<i>Juncus triglumis</i> Three-flowered Rush	Juncaceae	G5T5	S2				Carb, Stil	
<i>Kalmia occidentalis</i> Pale Laurel	Ericaceae	G5	S1				Flat, Miss	
<i>Kelloggia galioides</i> Kelloggia	Rubiaceae	G5	S1				Mine	
<i>Kobresia macrocarpa</i> Large-fruited Kobresia	Cyperaceae	G5	S1		S		Carb	
<i>Kobresia simpliciuscula</i> Simple Kobresia	Cyperaceae	G5	S2		W		Beav, Glac, Gran, Park, Teto	

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<i>Kochia americana</i> Red Sage	Chenopodiaceae	G5	SU				Beav	
<i>Koenigia islandica</i> Island Koenigia	Polygonaceae	G4	S1				Carb	
<i>Lagophylla ramosissima</i> Slender Hareleaf	Asteraceae	G5	S1				Lake, Sand	
<i>Lathyrus bijugatus</i> Latah Tule Pea	Fabaceae	G4	S1				Flat, Linc	RE
<i>Leptodactylon caespitosum</i> Leptodactylon	Polemoniaceae	G3G4	S1			W	Carb	
<i>Lesquerella carinata</i> var <i>languida</i> Garnet Bladderpod	Brassicaceae	G4T1	S1			S	Gran	SE
<i>Lesquerella humilis</i> Bitterroot Bladderpod	Brassicaceae	G1	S1		S		Rava	SE
<i>Lesquerella lescii</i> Lesica's Bladderpod	Brassicaceae	G1	S1			S	Carb	SE
<i>Lesquerella paysonii</i> Payson Bladderpod	Brassicaceae	G3	S1		S		Beav, Gran	RE
<i>Lesquerella pulchella</i> Beautiful Bladderpod	Brassicaceae	G2	S2		S		Beav	SE
<i>Lewisia columbiana</i> var <i>wallowensis</i> Columbia Lewisia	Portulacaceae	G4T4	S1				Rava	
<i>Lewisia pygmaea</i> var <i>nevadensis</i> Nevada Bitterroot	Portulacaceae	G4	S1				Beav, Deer, Rava	
<i>Lilaea scilloides</i> Flowering Quillwort	Juncaginaceae	G4	S1				Lake	
<i>Linaria canadensis</i> Blue Toadflax	Scrophulariaceae	G4G5	S1			W	Cart, Daws, McCo	
<i>Liparis loeselii</i> Loesel's Twayblade	Orchidaceae	G5	S1		S		Lake	

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<i>Lobelia spicata</i> Pale-spiked Lobelia	Campanulaceae	G5	SH				Rich, Sher	
<i>Lomatium attenuatum</i> Taper-tip Desert-parsley	Apiaceae	G2	S2			S	Beav, Madi	RE
<i>Lomatium geyeri</i> Geyer's Biscuitroot	Apiaceae	G3G4	<u>S1</u>		S		Linc	
<i>Lomatium nuttallii</i> Nuttall Desert-parsley	Apiaceae	G4	S1			W	BigH	
<i>Lomatogonium rotatum</i> Felwort	Gentianaceae	G5	S1			W	Beav, Rava	
<i>Lycopodium dendroideum</i> Treelike Clubmoss	Lycopodiaceae	G5	S1			W	Flat, Glac	
<i>Lycopodium inundatum</i> Northern Bog Clubmoss	Lycopodiaceae	G5	S1		S		Flat, Miss	
<i>Lycopodium lagopus</i> Running Pine	Lycopodiaceae	G5T?	S1					
<i>Lycopodium sitchense</i> Alaskan Clubmoss	Lycopodiaceae	<u>G5</u>	<u>S1</u>					
<i>Maianthemum canadense</i> Wild Lily-of-the-valley	Liliaceae	G5T4	S1				Cart	
<i>Malacothrix torreyi</i> Desert Dandelion	Asteraceae	G4	S1			S	Carb	
<i>Mentzelia montana</i> White-bract Stickleaf	Loasaceae	G4	SU					
<i>Mentzelia nuda</i> Bractless Mentzelia	Loasaceae	G5	S1		W		Cust, Daws, Vall	
<i>Mentzelia pumila</i> Dwarf Mentzelia	Loasaceae	G4	S2		S	W	Carb	
<i>Mertensia bella</i> Oregon Bluebells	Boraginaceae	G4	S1		S		Miss	

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<i>Mimulus breviflorus</i> Short-flowered Monkeyflower	Scrophulariaceae	G4	S1				Flat	
<i>Mimulus nanus</i> Dwarf Purple Monkeyflower	Scrophulariaceae	G5	S1				Gall, Rava	
<i>Mimulus primuloides</i> Primrose Monkeyflower	Scrophulariaceae	G4	S2		S		Beav, Rava	
<i>Mirabilis hirsuta</i> Hairy Four-o'clock	Nyctaginaceae	G5	S1			W	Cart, Chou, Sher	
<i>Myosotis verna</i> Early Forget-me-not	Boraginaceae	G5	S1				Flat, Lake, Miss, Rava	
<i>Najas guadalupensis</i> Guadalupe Water-nymph	Najadaceae	G5	S1			W	Casc, Flat, Lake, Rava	
<i>Nama densum</i> Nama	Hydrophyllaceae	G5	S1			S	Carb	
<i>Nymphaea tetragona</i> Pygmy Water-lily	Nymphaeaceae	G5	S1				Flat, Lake, Miss	
<i>Oenothera pallida</i> var <i>idahoensis</i> Pale Evening-primrose	Onagraceae	G5T4Q	S1			S	Beav	RE
<i>Ophioglossum pusillum</i> Adder's Tongue	Ophioglossaceae	G5	S2		S		Flat, Lake, Linc, Miss	
<i>Orogenia fusiformis</i> Tapered-root Orogenia	Apiaceae	G5	S2		S		Beav, Madi, Miss, Rava	
<i>Oxytropis campestris</i> var <i>columbiana</i> Columbia Crazyweed	Fabaceae	G5T3Q	S1				Flat, Lake	RE
<i>Oxytropis deflexa</i> var <i>foliolosa</i> Pendent-pod Crazyweed	Fabaceae	G5T?	S1				Madi	
<i>Oxytropis parryi</i> Parry's Crazyweed	Fabaceae	G5	S1				Beav	
<i>Oxytropis podocarpa</i> Stalked-pod Crazyweed	Fabaceae	G4	S1		S		Glac, Teto	

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<i>Papaver kluanensis</i> Alpine Poppy	Papaveraceae	G3?Q	S1				Carb, Park, Swee	
<i>Penstemon angustifolius</i> Narrowleaf Penstemon	Scrophulariaceae	G5	S2			W	Cart, Daws, Miss	
<i>Penstemon attenuatus</i> var <i>militaris</i> Taper-leaved Beardtongue	Scrophulariaceae	G4T4	S1		W		Rava	RE
<i>Penstemon globosus</i> Globe Beardtongue	Scrophulariaceae	G4	S2				Gran	
<i>Penstemon grandiflorus</i> Large Flowered Beardtongue	Scrophulariaceae	G5?	S1				Cust	
<i>Penstemon lemhiensis</i> Lemhi Beardtongue	Scrophulariaceae	G3	S2		S	S	Beav, Deer, Rava, Silv	RE
<i>Penstemon payetensis</i> Payette Beardtongue	Scrophulariaceae	G4	S1				Rava	RE
<i>Penstemon whippleanus</i> Whipple's Beardtongue	Scrophulariaceae	G5	S1			S	Beav, Madi	
<i>Petasites frigidus</i> var <i>nivalis</i> Palmate-leaved Coltsfoot	Asteraceae	G5T?	S1		PS		Flat, Glac	
<i>Phacelia incana</i> Hoary Phacelia	Hydrophyllaceae	G3G4	<u>S2</u>			W	Beav	
<i>Phacelia scopulina</i> Dwarf Phacelia	Hydrophyllaceae	G4	SH			W	Madi, Silv	
<i>Phacelia thermalis</i> Hot Spring Phacelia	Hydrophyllaceae	G3G4	S1			W	Ferg, Garf, Phil	
<i>Phippsia algida</i> Ice Grass	Poaceae	G5	S2				Carb, Stil	
<i>Phlox andicola</i> Plains Phlox	Polemoniaceae	G4	S1			W	Cart, Daws, Rose	
<i>Phlox kelseyi</i> var <i>missoulenensis</i> Missoula Phlox	Polemoniaceae	G2	S2		S		Casc, Gran, Judi, Lewi, Meag, Miss, Powe	SE

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<i>Physaria brassicoides</i> Double Bladderpod	Brassicaceae	G5	S1				Cart	RE
<i>Physaria didymocarpa</i> var <i>lanata</i> Woolly Twinpod	Brassicaceae	G5T2	SU				Bigh	RE
<i>Plagiobothrys leptocladius</i> Slender-branched Popcorn-flower	Boraginaceae	G4	S1			W	Cust, Glac, Phil	
<i>Poa curta</i> Short-leaved Bluegrass	Poaceae	G4	S1			W	Carb	
<i>Poa laxa</i> ssp <i>banffiana</i> Banff Loose-flowered Bluegrass	Poaceae	G5?T1	SU					
<i>Polygonum douglasii</i> ssp <i>austinae</i> Austin's Knotweed	Polygonaceae	G5T4	S2S3		S		Broa, Flat, Lewi, Madi, Pond, Teto	
<i>Polystichum kruckebergii</i> Kruckeberg's Sword-fern	Dryopteridaceae	G4	S1				Deer, Lake, Miss	
<i>Polystichum scopulinum</i> Mountain Holly-fern	Dryopteridaceae	G5	S1				Rava, Sand	
<i>Potamogeton obtusifolius</i> Blunt-leaved Pondweed	Potamogetonaceae	G5	S2		S		Flat, Glac, Lake, Miss	
<i>Potentilla brevifolia</i> Short-leaved Cinquefoil	Rosaceae	G4	S1				Madi	RE
<i>Potentilla hyparctica</i> Low Arctic Cinquefoil	Rosaceae	G4G5	S1				Carb	
<i>Potentilla plattensis</i> Platte Cinquefoil	Rosaceae	G4	S1			W	Beav, Bigh, Carb	
<i>Potentilla quinquefolia</i> Five-leaf Cinquefoil	Rosaceae	G5T4	S2				Flat, Glac, Madi, Pond, Vall, YNPK	
<i>Potentilla uniflora</i> One-flowered Cinquefoil	Rosaceae	G5	S1				Carb, Glac, Gran	
<i>Primula alcalina</i> Idaho Primrose	Primulaceae	G1	SU			W	Beav	RE

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<i>Primula incana</i> Mealy Primrose	Primulaceae	G4G5	S2			W	Beav, Madi	
<i>Prunus pumila</i> Sand Cherry	Rosaceae	G5	S1				Fall	
<i>Psilocarphus brevisissimus</i> Dwarf Woolly-heads	Asteraceae	G5	S1			W	Casc, Phil, Sand	
<i>Psoralea hypogaea</i> Little Indian Breadroot	Fabaceae	G5T4?	S2			W	Casc, Chou, Ferg, Rose	
<i>Quercus macrocarpa</i> Bur Oak	Fagaceae	G5	S1			S	Cart	
<i>Ranunculus cardiophyllus</i> Heart-leaved Buttercup	Ranunculaceae	G4G5	S2			W	Glac, Sweet, Tool	
<i>Ranunculus gelidus</i> Arctic Buttercup	Ranunculaceae	G4	S1				Stil	
<i>Ranunculus hyperboreus</i> Arctic Buttercup	Ranunculaceae	G5	S1				Deer, Gall	
<i>Ranunculus jovis</i> Jove's Buttercup	Ranunculaceae	G4	S2		S		Beav, Gall, Madi, Park	
<i>Ranunculus orthorhynchus</i> Straightbeak Buttercup	Ranunculaceae	G5T5	S1				Deer, Gran, Mine	
<i>Ranunculus pedatifidus</i> Northern Buttercup	Ranunculaceae	G5	S1			W	Flat, Glac, Gran, Libe, Tool	
<i>Ranunculus verecundus</i> Timberline Buttercup	Ranunculaceae	G5	S2				Deer, Flat, Glac, Madi	
<i>Ribes cognatum</i> Shinyleaf Gooseberry	Grossulariaceae	G4Q	S1				Linc, Mine, Sand	RE
<i>Ribes triste</i> Swamp Red Currant	Grossulariaceae	G5	S1				Deer, Gran, Mine, Rava	
<i>Rorippa calycina</i> Persistent-sepal Yellow-cress	Brassicaceae	G3	S1		W	W	Casc, Chou, Cust, McCo, Yell	RE

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<i>Rotula ramosior</i> Toothcup	Lythraceae	G5	S1				Lake, Miss, Rava	
<i>Sagina nivalis</i> Arctic Pearlwort	Caryophyllaceae	G5	S1				Glac, Stil	
<i>Salix barrattiana</i> Barratt's Willow	Salicaceae	G5	S1		S		Carb, Glac	
<i>Salix cascadenis</i> Cascades Willow	Salicaceae	G4G5	S1				Deer	
<i>Salix serissima</i> Autumn Willow	Salicaceae	G4	<u>S2</u>		W	W	Glac, Meag, Teto	
<i>Salix wolfii</i> var <i>wolfii</i> Wolf's Willow	Salicaceae	G5?T4	S2		S		Deer, Gall, Madi, Park, Rava, Swee	
<i>Satureja douglasii</i> Yerba Buena	Lamiaceae	G4	S2				Miss, Rava, Sand	
<i>Saussurea densa</i> Dwarf Saw-wort	Asteraceae	G3G5	S2		S		Lewi, Pond, Teto	RE
<i>Saussurea weberi</i> Weber's Saw-wort	Asteraceae	G3Q	S1		S		Gran	
<i>Saxifraga apetala</i> Tiny Swamp Saxifrage	Saxifragaceae	G3Q	S2				Beav, Carb	RE
<i>Saxifraga hirculus</i> Yellow Marsh Saxifrage	Saxifragaceae	G5	S1				Carb	
<i>Saxifraga tempestiva</i> Storm Saxifrage	Saxifragaceae	G2	S2		S		Beav, Deer, Gran, Madi, Rava	SE
<i>Scheuchzeria palustris</i> Pod Grass	Scheuchzeriaceae	G5	S2		S		Flat, Lake, Linc, Miss	
<i>Scirpus cespitosus</i> Tufted Club-rush	Cyperaceae	G5	S2		PS		Beav, Flat, Powe, Teto	
<i>Scirpus heterochaetus</i> Slender Bulrush	Cyperaceae	G5	S1				Sher	

Vascular Plant Species of Special Concern, June 1997

Scientific Name Common Name	Family	Global Rank	State Rank	FWS Status	FS Status	BLM Status	County Distribution	Range Notes
<i>Scirpus hudsonianus</i> Hudson's Bay Bulrush	Cyperaceae	G5	S1				Flat, Glac	
<i>Scirpus pumilus</i> Small Clubrush	Cyperaceae	G3Q	S1				Glac, Teto	
<i>Scirpus subterminalis</i> Water Bulrush	Cyperaceae	G4G5	S2		S		Flat, Lewi, Linc, Miss	
<i>Selaginella selaginoides</i> Low Spike-moss	Selaginellaceae	G5	<u>S2</u>				Beav, Deer, Gran, Madi	
<i>Senecio amplexans</i> Clasping Groundsel	Asteraceae	G4T?	S1				Carb	
<i>Senecio eremophilus</i> Desert Groundsel	Asteraceae	G5T5	S1				Hill, Park	
<i>Senecio pauciflorus</i> Few-flowered Butterweed	Asteraceae	G4G5	<u>S1</u>				Flat	
<i>Shoshonea pulvinata</i> Shoshonea	Apiaceae	G2G3	S1		S	S	Carb	RE
<i>Sidalcea oregana</i> Oregon Checker-mallow	Malvaceae	G5	S1				Gall, Lake	
<i>Silene spaldingii</i> Spalding's Campion	Caryophyllaceae	G2	S1		W		Flat, Lake, Linc, Sand	RE
<i>Solidago ptarmicoides</i> Prairie Aster	Asteraceae	G5	S1				Cart, Rich	
<i>Solidago sparsiflora</i> Few-flowered Goldenrod	Asteraceae	G?	S1			W	Garf, Stil	
<i>Sphaeralcea munroana</i> White-stemmed Globe-mallow	Malvaceae	G4	S1				Beav	
<i>Sphaeromeria argentea</i> Chicken Sage	Asteraceae	G3	S2			S	Beav	
<i>Sphenopholis intermedia</i> Slender Wedgegrass	Poaceae	G5	SH			W	Gall	

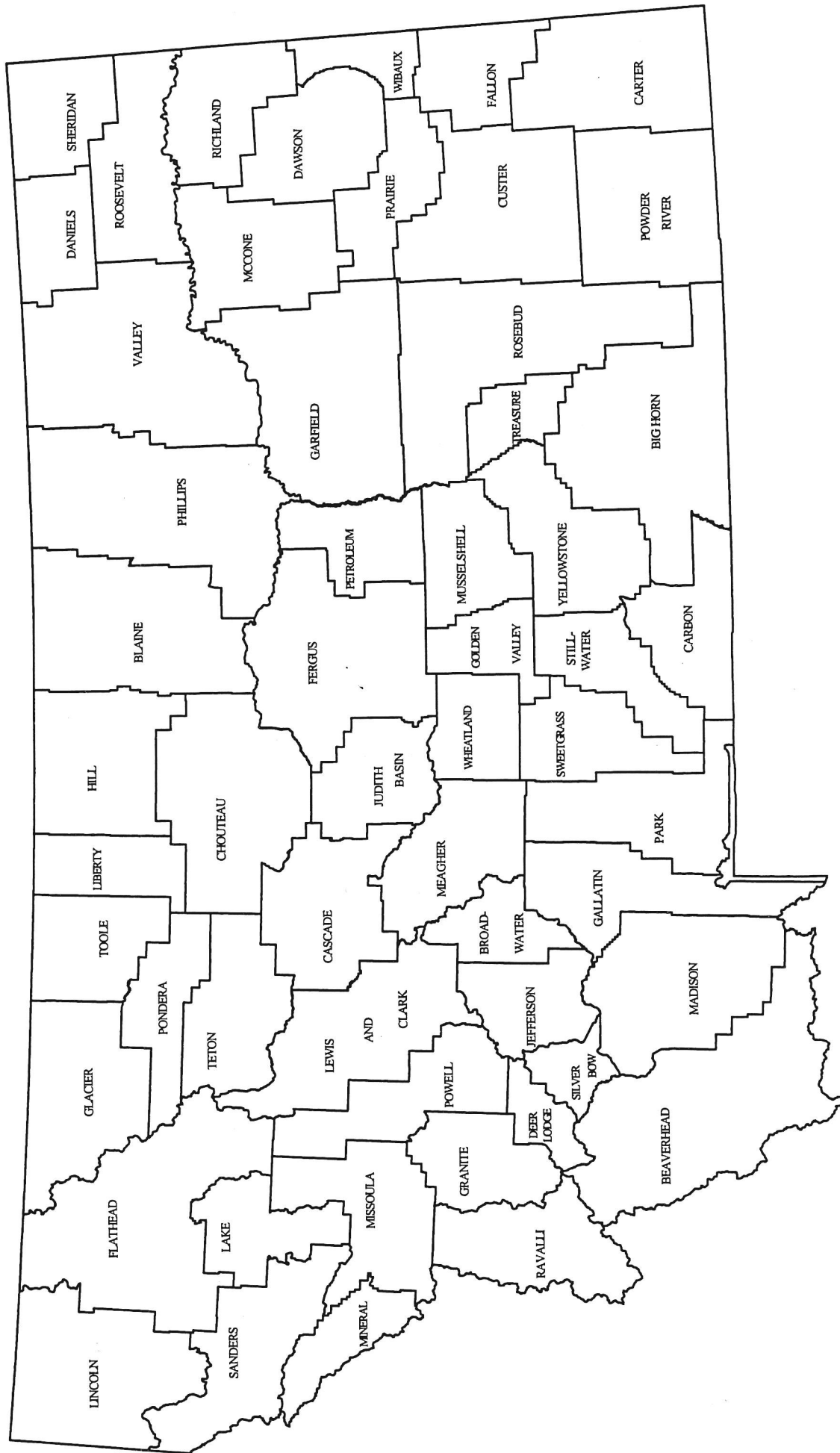
Vascular Plant Species of Special Concern, June 1997

Scientific Name Common Name	Family	Global Rank	State Rank	FWS Status	FS Status	BLM Status	County Distribution	Range Notes
<i>Spiranthes diluvialis</i> Ute Ladies' Tresses	Orchidaceae	G2	S1	LT		W	Jeff, Madi	
<i>Sporobolus asper</i> Longleaf Dropseed	Poaceae	G5	SU			W	Cart, Cust	
<i>Sporobolus neglectus</i> Small Dropseed	Poaceae	G5	SU			W	Gall, Sand, Whea	
<i>Stellaria crassifolia</i> Fleshy Stitchwort	Caryophyllaceae	G5	S1			W	Beav, Carb, Deer, Sand	
<i>Stellaria jamesiana</i> James Stitchwort	Caryophyllaceae	G5	S1			W	Beav	
<i>Stephanomeria spinosa</i> Spiny Skeletonweed	Asteraceae	G4	S1			W	Beav, Madi	
<i>Stipa lettermanii</i> Letterman's Needlegrass	Poaceae	G5	S1				BigH, Madi	
<i>Suckleya suckleyana</i> Poison Suckleya	Chenopodiaceae	G5	SU				Roos, Vall	
<i>Sullivantia hapemanii</i> Wyoming Sullivantia	Saxifragaceae	G3T3	S1				BigH, Carb	
<i>Taraxacum eriophorum</i> Rocky Mountain Dandelion	Asteraceae	G4	S1			S	Beav, Gran, Madi	
<i>Thalictrum alpinum</i> Alpine Meadowrue	Ranunculaceae	G5	S1		S	S	Beav, Gran	
<i>Thelypodium paniculatum</i> Northwestern Thelypody	Brassicaceae	G3G4	SH			S	Beav	RE
<i>Thelypodium sagittatum</i> Slender Thelypody	Brassicaceae	G4T?	S2				Beav, Flat, Gall, Lake	
<i>Thelypteris phegopteris</i> Northern Beechfern	Thelypteridaceae	G5	<u>S2</u>		S		Flat, Glac, Linc, Sand	
<i>Thlaspi parviflorum</i> Small-flowered Pennycress	Brassicaceae	G3	S2		S		Beav, Carb, Madi, Park, Silv	RE

Vascular Plant Species of Special Concern, June 1997

Scientific Name Common Name	Family	Global Rank	State Rank	FWS Status	FS Status	BLM Status	County Distribution	Range Notes
<i>Tofieldia pusilla</i> Tofieldia	Liliaceae	G5	S2				Glac	
<i>Townsendia condensata</i> Cushion Townsendia	Asteraceae	G4	S2			W	Beav, Glac, Madi, Park	RE
<i>Townsendia florifer</i> Showy Townsendia	Asteraceae	G5	S1			W	Beav, Madi	
<i>Townsendia leptotes</i> Slender Townsendia	Asteraceae	G4	SU					
<i>Trifolium cyathiferum</i> Cup Clover	Fabaceae	G4	S1				Miss, Rava	
<i>Trifolium eriocephalum</i> Woolly-head Clover	Fabaceae	G4T3	S1		S		Rava	
<i>Trifolium gymnocarpon</i> Hollyleaf Clover	Fabaceae	G4	S2		S		Gran, Rava	
<i>Utricularia intermedia</i> Flat-leaved Bladderwort	Lentibulariaceae	G5	S1				Flat, Miss, Powe	
<i>Vaccinium myrtilloides</i> Velvetleaf Blueberry	Ericaceae	G5	S1		W		Flat	
<i>Veratrum californicum</i> California False-hellebore	Liliaceae	G5	S1		S	W	Gran	
<i>Viburnum lentago</i> Nannyberry	Caprifoliaceae	G5	S1				BigH, Roos	
<i>Viguiera multiflora</i> Many-flowered Viguiera	Asteraceae	G4G5	SU				Beav, Gall, Madi	
<i>Viola renifolia</i> Kidney-leaf White Violet	Violaceae	G5	S3		S	W	Flat, Glac, Jeff, Lake, Linc, Miss, Silv, Teto	
<i>Waldsteinia idahoensis</i> Idaho Barren Strawberry	Rosaceae	G3	S1		S		Miss	RE
<i>Wolffia columbiana</i> Columbia Water-meal	Lemnaceae	G5	S2			W	Flat, Lake, Miss, Rava	
<i>Zizia aurea</i> Golden Alexanders	Apiaceae	G5	SH				Jeff	

Montana Counties



Watch Vascular Plant List, June 1997

The Watch Vascular Plant List is made up of two sets of species:

Limited distribution species (42 total) are species of biogeographic interest. They include species which are state endemics, and other species which are in highly restricted areas or habitats of the state. A process for compiling and presenting information on their distribution is under development.

Species of unresolved status (120 total) are species to evaluate for addition to the Montana Plant Species of Special Concern list in the future. The overriding status question fits into one of six cases revolving around taxonomy (taxonomic validity, resolving disputes of specimen identification), natural distribution (whether there is a specimen voucher, whether or not it was brought into the state by humans), vulnerability as reflected in response to unnatural disturbance, and completion of base-level information compilation (accession records from major Montana herbaria, published sources and any needed consultation). We have also included a seventh case for recurrent hybrids. A summary statement of their status is available upon request.

Collection label information and commentary are invited on any Watch List species, and MTNHP will continue evaluating their status. The scientific name and global rank of watch species are presented below.

Limited Distribution Species

Antennaria aromatica (G4)
Astragalus chamaeleuce (G5)
Astragalus lentiginosus var *salinus* (G5T5)
Astragalus leptaleus (G4)
Astragalus platytropis (G5)
Cardamine rupicola (G3)
Carex capitata (G5)
Carex misandra (G5)
Carex torreyi (G4)
Castilleja nivea (G3)
Castilleja pilosa var *longispica* (G4?T4)
Castilleja rustica (G4G5T3T4)
Chrysothamnus linifolius (G5)
Delphinium bicolor ssp *calcicola* (G4G5T3)
Draba daviesiae (G3)
Draba sp 1 (G3G4)
Erigeron allocotus (G3)
Erigeron coulteri (G5)
Erigeron flabellifolius (G3G4)
Eriogonum capistratum var *muhlickii* (G4T?)
Eriogonum lagopus (G3)

Eriophorum viridicarinatum (G5)
Gentiana aquatica (G4)
Gilia inconspicua (G5)
Haplopappus multicaulis (G4)
Ipomopsis congesta ssp *pseudotypica* (G5T?)
Mimulus suksdorfii (G4)
Oryzopsis contracta (G3)
Oxytropis lagopus var *conjugens* (G4T3)
Papaver pygmaeum (G3)
Pedicularis contorta var *rubicunda* (G5T2)
Pedicularis oederi (G5)
Pediocactus simpsonii (G4)
Penstemon caryi (G3)
Penstemon flavescens (G3)
Physaria saximontana var *dentata* (G3T2)
Senecio debilis (G3G4)
Sphaeromeria capitata (G3)
Synthyris canbyi (G3)
Synthyris missurica (G4)
Townsendia nuttallii (G3)
Townsendia spathulata (G3)

Species of Unresolved Status

Unresolved as native

Achillea sibirica (G5?)
Calamagrostis koelerioides (G5)
Gnaphalium purpureum var *purpureum* (G5TU)
Oxalis stricta (G5)
Physalis pumila (G5)
Polygonum polygaloides (G4G5)
Scirpus pendulus (G5)
Sparganium androcladum (G4G5)
Sporobolus vaginiflorus (G5)
Stipa thurberiana (G5)
Thelesperma megapotamicum (G5)
Tillaea aquatica (G5)
Viburnum opulus (G5)

Unresolved as vulnerable

Amaranthus californicus (G4)
Ambrosia acanthicarpa (G5)
Ambrosia tomentosa (G4)
Amsinckia lycopsoides (G?)
Bidens frondosa (G5)
Carex eburnea (G5)
Cuscuta pentagona var *pentagona* (G5T5)
Elatine americana (G4)
Erigeron flagellaris (G5)
Evax prolifera (G5)
Halimolobos virgata (G4)
Lemna minuta (G4)
Lemna valdiviana (G5)
Lilium columbianum (G4G5)
Madia minima (G4)

Species of Unresolved Status (continued)

Unresolved pending compilation of collection records

Agastache foeniculum (G4G5)
Aster foliaceus var *lyallii* (G3?)
Astragalus kentrophyta var *kentrophyta* (G5T4)
Astragalus miser var *crispatus* (G5T3?)
Atriplex canescens (G5)
Carex jonesii (G5)
Carex lacustris (G5)
Claytonia cordifolia (G5)
Collomia debilis var *camporum* (G5T3)
Conimitella williamsii (G3)
Cryptogramma cascadenis (G5)
Floerkea proserpinacoides (G5)
Geum canadense (G5)
Hierochloa odorata (G5)
Huperzia haleakalae (G4?)
Impatiens aurella (G4?)
Impatiens ecalcarata (G3G4)
Juncus tweedyi (G3)
Juncus vaseyi (G5?)
Lilium philadelphicum (G5)
Penstemon montanus var *idahoensis* (G5T?)
Rubus arcticus (G5)
Saxifraga subapetala (G3G4Q)
Selaginella densa var *standleyi* (G5TU)

Unresolved pending specimen review

Antennaria neodioica ssp *neodioica* (G4G5T?)
Antennaria pulcherrima (G4G5)
Artemisia tilesii ssp *unalaschensis* (G5T3)
Calamagrostis scopulorum (G5)
Carex brunnescens (G5)
Carex ebenea (G5)
Delphinium burkei (G4)
Hymenopappus filifolius var *idahoensis* (G5T4)
Hymenopappus filifolius var *luteus* (G5T?)
Juncus interior (G4G5)
Lomatium farinosum (G4G5)
Oenothera elata ssp *hirsutissima* (G5T?)
Tradescantia bracteata (G5)
Viola palustris (G5)
Viola septentrionalis (G5)

Unresolved report for Montana

Acorus americanus (G5)
Arabis sparsiflora var *columbiana* (G5TU)
Arabis sparsiflora var *subvillosa* (G5T?)
Artemisia longiloba (G5T4)
Aster simplex var *ramosissimus* (G5T?)
Camissonia tanacetifolia (G5)
Carex aenea (G5)

Unresolved report for Montana (continued)

Carex microglochin (G5?)
Carex microptera var *crassinervia* (G5?T3T4)
Carex pelocarpa (G3?)
Carex straminiformis (G4)
Castilleja crista-galli (G3)
Cirsium pulcherrimum (G5)
Cordylanthus capitatus (G4)
Eleocharis flavescens (G5)
Eriophorum scheuchzeri (G5)
Euthamia graminifolia (G5)
Galium cymosum (G?)
Geum rossii var *rossii* (G5T5)
Heterotheca villosa var *depressa* (G5T2)
Hierochloa alpina (G5)
Isoetes lacustris (G4G5)
Isoetes nuttallii (G4?)
Ligusticum porteri (G4G5)
Ligusticum verticillatum (G4G5)
Mimulus glabratus var *fremontii* (G5T?)
Muhlenbergia montana (G5)
Navarretia divaricata (G5)
Physalis hederifolia var *comata* (G5?T4?)
Poa macroclada (G3)
Potentilla concinna var *macounii* (G2?)
Salix petiolaris (G5)
Stipa lemmonii var *lemmonii* (G5T?)
Vaccinium ovalifolium (G5)
Verbena bipinnatifida (G5)
Vernonia fasciculata (G5T?)
Viola pedatifida (G5)

Unresolved taxonomy

Carex luzulina var *atropurpurea* (G5T3)
Cymopterus hendersonii (G5)
Delphinium geyeri (G5)
Draba lonchocarpa var *exigua* (G4T3)
Eleocharis bella (G5)
Eleocharis xyridiformis (G4Q)
Eriogonum chrysocephalum (GUQ)
Eriogonum umbellatum var *aureum* (G5TU)
Grindelia nana var *integrifolia* (G5T4)
Mirabilis albida (G5)
Senecio hyperborealis (G5)
Stellaria simcoeii (G4Q)

Hybrid

Cypripedium x *columbianum* (HYB)
Equisetum x *ferrissii* (HYB)
Equisetum x *trachyodon* (HYB)
Spiraea x *pyramidata* (HYB)
Trisetum x *orthochaetum* (HYB)

Nonvascular Plants of Special Concern, June 1997

Introduction

The following list of mosses is based on a state floristic compilation prepared for the U.S. Forest Service and subsequent evaluation (Elliot 1995). It includes species with highly specialized habitat requirements, species which have not been collected for over 70 years, and other species which have not been collected more than three times in the state, including the most recent additions to the state flora. Global ranking follows that for vascular plants (see pages 1 and 2), however, state rank definitions for mosses have been modified as follows:

State Rank	Definition
S1	Potentially critical imperiled because of both species and habitat rarity (3 or fewer collections and highly restricted to rare habitat).
S2	Potentially imperiled because of both species and habitat rarity (20 or fewer collections and highly restricted to rare habitat).
SH	Historically known only from records before 1925; may be rediscovered.
SU	Unknown (3 or fewer collections but collection label is incomplete or habitat restrictions and habitat rarity are poorly known to rank the species).

Work is underway to enter location records for mosses based on existing collections; however, county of distribution information is not available at this time. Major Montana bryophyte collections are available for reference at the University of Montana and the U.S. Forest Service's Intermountain Research Station Resource Center Herbarium in Missoula. Moss collectors are encouraged to use the Plant Species of Special Concern Survey Form when submitting information to MTNHP

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- Lawton, E. 1971. Keys for the identification of the mosses of the Pacific Northwest (Reprinted from *Moss flora of the Pacific Northwest*). Hattori Botanical Lab., Nichinan, Japan. 66 pp.
- Schofield, W. B. 1992. *Some common mosses of British Columbia*. Royal British Columbia Museum, Victoria, B.C. Canada. 394 pp.
- Vitt, D. H., J. E. Marsh and R. B. Bovey. 1988. *Mosses, lichens and ferns of northwest North America*. Lone Pine Publishing, Edmonton, Alberta, Canada. 296 pp.

Scientific Name	Family	Global Rank	State Rank
Bryophytes			
<i>Aloina brevirostris</i>	Pottiaceae	G3G5	SH
<i>Amblyodon dealbatus</i>	Meesiaceae	G3G5	SH
<i>Bartramia stricta</i>	Bartramiaceae	G?	S1
<i>Brachythecium reflexum</i>	Brachytheciaceae	G4G5	SH
<i>Brachythecium turgidum</i>	Brachytheciaceae	G3G5	S1
<i>Bryum calobryoides</i>	Bryaceae	G3	SH
<i>Bryum calophyllum</i>	Bryaceae	G?	SH
<i>Bryum dichotomum</i>	Bryaceae	G5?	S1
<i>Bryum lonchocaulon</i>	Bryaceae	G?	S1
<i>Bryum pallens</i>	Bryaceae	G4G5	S1
<i>Bryum schleicheri</i>	Bryaceae	G?	S1
<i>Callicladium haldanianum</i>	Hypnaceae	G5	SH
<i>Calliergon richardsonii</i>	Amblystegiaceae	G3	S1
<i>Calliergon trifarium</i>	Amblystegiaceae	G5	S1
<i>Calliergonella cuspidata</i>	Amblystegiaceae	G5	S1
<i>Catocopium nigrum</i>	Catocopiaceae	G4G5	S1
<i>Cinclidium sygium</i>	Mniaceae	G5	S1
<i>Crumia latifolia</i>	Pottiaceae	G4	S1
<i>Cynodontium tenellum</i>	Dicranaceae	G?	SH
<i>Dendrocladia abietina</i>	Cryphaeaceae	G4	SH
<i>Desmatodon cernuus</i>	Pottiaceae	G3G5	SH
<i>Desmatodon heimii</i>	Pottiaceae	G5	SH
<i>Dichodontium olympicum</i>	Dicranaceae	G?	S1
<i>Dicranella grevilleana</i>	Dicranaceae	G?	S1
<i>Dicranella heteromalla</i>	Dicranaceae	G?	S1
<i>Dicranoweisia cirrata</i>	Dicranaceae	G4	S1
<i>Dicranum acutifolium</i>	Dicranaceae	G?	S1
<i>Dicranum fragilifolium</i>	Dicranaceae	G4G5	S1
<i>Dicranum spadiceum</i>	Dicranaceae	G?	S1
<i>Didymodon fallax</i> var <i>reflexus</i>	Pottiaceae	G5T5?	S1
<i>Didymodon rigidulus</i> var <i>gracilis</i>	Pottiaceae	G5T5?	S1
<i>Didymodon vinealis</i> var <i>brachyphyllus</i>	Pottiaceae	G5T?	S1
<i>Distichium inclinatum</i>	Ditrichaceae	G4G5	S1
<i>Entosthodon rubiginosus</i>	Funariaceae	GH	SH
<i>Eucladium verticillatum</i>	Pottiaceae	G5	S1
<i>Eurhynchium pulchellum</i> var <i>barnesii</i>	Brachytheciaceae	G5T?	S1
<i>Fabronia pusilla</i>	Fabroniaceae	G5?	S1
<i>Fissidens fontanus</i>	Fissidentaceae	G5	S1
<i>Funaria americana</i>	Funariaceae	G2G3	SH

Nonvascular Plants of Special Concern, June 1997

Scientific Name	Family	Global Rank	State Rank	Scientific Name	Family	Global Rank	State Rank
Bryophytes (continued)				Bryophytes (continued)			
<i>Grimmia brittoniae</i>	Grimmiaceae	G1	S1	<i>Pseudocrossidium obtusulum</i>	Pottiaceae	G?	S1
<i>Grimmia incurva</i>	Grimmiaceae	G4G5	S1	<i>Pterygoneurum lamellatum</i>	Pottiaceae	G?	S1
<i>Grimmia mollis</i>	Grimmiaceae	G3G5	S1	<i>Pterygoneurum sub sessile</i>	Pottiaceae	G4?	S1
<i>Herzogiella striatella</i>	Hypnaceae	G4G5	S1	<i>Ptychomitrium gardneri</i>	Ptychomitriaceae	G4	S1
<i>Herzogiella turfosa</i>	Hypnaceae	G4G5	S1	<i>Racomitrium aquaticum</i>	Grimmiaceae	G?	S1
<i>Hygroamblystegium noterophilum</i>	Amblystegiaceae	G4	S1	<i>Racomitrium brevipes</i>	Grimmiaceae	G?	S1
<i>Hygrohypnum cochlearifolium</i>	Amblystegiaceae	G?	S1	<i>Racomitrium pygmaeum</i>	Grimmiaceae	G?	S1
<i>Hypnum callichroum</i>	Hypnaceae	G?	S1	<i>Sarmenthyphnum sarmentosum</i>	Amblystegiaceae	G4G5	S1
<i>Kiaeria blyttii</i>	Hypnaceae	G5	S1	<i>Schistostega pennata</i>	Schistostegiaceae	G4G5	S1
<i>Kiaeria falcata</i>	Dicranaceae	G5	S1	<i>Scorpidium scorpioides</i>	Amblystegiaceae	G4G5	S1
<i>Kiaeria starkei</i>	Dicranaceae	G5	S1	<i>Seligeria domiana</i>	Seligeriaceae	G4G5	S1
<i>Leucolepis acanthoneuron</i>	Mniaceae	G4	S1	<i>Sphagnum centrale</i>	Sphagnaceae	G5	S1
<i>Meesia longiseta</i>	Meesiaceae	G3G4	S1	<i>Sphagnum compactum</i>	Sphagnaceae	G5	S1
<i>Meesia triquetra</i>	Meesiaceae	G5	S1	<i>Sphagnum contortum</i>	Sphagnaceae	G5	S1
<i>Meesia uliginosa</i>	Meesiaceae	G5	S1	<i>Sphagnum fallax</i>	Sphagnaceae	G5	S1
<i>Mielichhoferia macrocarpa</i>	Bryaceae	G?	S1	<i>Sphagnum fimbriatum</i>	Sphagnaceae	G5	S1
<i>Myurella tenerima</i>	Pterigynandraceae	G2G3	S1	<i>Sphagnum girgensohnii</i>	Sphagnaceae	G5	S1
<i>Neckera douglasii</i>	Neckeraceae	G4	S1	<i>Sphagnum magellanicum</i>	Sphagnaceae	G4	S1
<i>Neckera pennata</i>	Neckeraceae	G5	S1	<i>Sphagnum mendocinum</i>	Sphagnaceae	G5	S1
<i>Oligotrichum aligerum</i>	Polytrichaceae	G5	S1	<i>Sphagnum platyphyllum</i>	Sphagnaceae	G5	S1
<i>Orthotrichum praemorsum</i>	Orthotrichaceae	G?	S1	<i>Sphagnum riparium</i>	Sphagnaceae	G5	S1
<i>Oxystegus tenuirostris</i>	Pottiaceae	G5	SH	<i>Sphagnum subnitens</i>	Sphagnaceae	G5	S1
<i>Paludella squarrosa</i>	Meesiaceae	G3G5	S1	<i>Sphagnum wulfianum</i>	Sphagnaceae	G5	S1
<i>Paraleucobryum enerve</i>	Dicranaceae	G5?	S1	<i>Stegonia latifolia</i>	Pottiaceae	G?	S1
<i>Paraleucobryum longifolium</i>	Dicranaceae	G5	S1	<i>Tayloria acuminata</i>	Splachnaceae	G3G4	SH
<i>Phascum cuspidatum</i>	Pottiaceae	G5	S1	<i>Tayloria lingulata</i>	Splachnaceae	G3G5	S1
<i>Physcomitrium hookeri</i>	Funariaceae	G2G4	SH	<i>Tayloria serrata</i>	Splachnaceae	G5	S1
<i>Physcomitrium pyriforme</i>	Funariaceae	G5	SU	<i>Tetraplodon angustatus</i>	Splachnaceae	G3?	S1
<i>Plagiobryum demissum</i>	Bryaceae	G?	S1	<i>Thamnobryum neckeroides</i>	Thamnobryaceae	G?	SH
<i>Plagiobryum zieri</i>	Bryaceae	G3G4	S1	<i>Tortula bartramii</i>	Pottiaceae	G2G4	S1
<i>Platyhypnidium riparioides</i>	Brachytheciaceae	G5	S1	<i>Tortula muralis</i>	Pottiaceae	G5	S1
<i>Pohlia drummondii</i>	Bryaceae	G3G4	S1	<i>Tortula norvegica</i>	Pottiaceae	G5	S1
<i>Pohlia obtusifolia</i>	Bryaceae	G?	S1	<i>Tortula papillosa</i>	Pottiaceae	G5	S1
<i>Pohlia vexans</i>	Bryaceae	G?	SH	<i>Trachybryum megaptilum</i>	Brachytheciaceae	G4	S1
<i>Polytrichum lyallii</i>	Polytrichaceae	G?	S1	<i>Warristorfia exannulata</i>	Amblystegiaceae	G5	S1
<i>Porotrichum bigelovii</i>	Thamnobryaceae	G4	S1				
<i>Pseudocalliergon turgescens</i>	Amblystegiaceae	G3G5	S1	Lichen			
				<i>Bryoria subdivergens</i>	Parmeliaceae	G2	S1

New Botany Reports and Publications

Listed below are botany reports and publications which were produced through the Montana Natural Heritage Program over the past year as of June, 1997. Complete lists of MTNHP botany literature are available, as are botanical reference search services by geographic area, by species, or by select keywords. In addition, a complete bibliography of Montana reports and reports of all heritage Programs in the West can be found on our home page (<http://nris.mt.gov/mtnhp>).

- Elliott, J. and T. Spribille. 1997. Preliminary list of mosses of the Kootenai National Forest. Unpublished report to the Kootenai National Forest. Montana Natural Heritage Program, Helena. 21 pp.
- Elliott, Joe C. 1997. Moss flora of Giant Springs State Park. Unpublished report to Montana Department of Fish, Wildlife, and Parks, Great Falls. Montana Natural Heritage Program, Helena. 5 pp.
- Heidel, B. L. 1996. Region 4 sensitive species inventories. Unpublished memo to the Montana Department of Fish, Wildlife and Parks, Great Falls. Montana Natural Heritage Program, Helena. 6 pp. + appendices
- Heidel, B. L. 1997. Woodhawk botanical survey, Fergus County, Montana. Unpublished report to the Bureau of Land Management. Montana Natural Heritage Program, Helena. 43 pp. + appendices
- Heidel, B. L. 1997. Interim report on the conservation status of *Spiranthes diluvialis* Sheviak in Montana. Unpublished report to U. S. Fish and Wildlife Service. Montana Natural Heritage Program, Helena. 33 pp. + appendices
- Heidel, B. L. 1997. Botanical survey of the Alkali Lake area, Blackfeet Indian Reservation. Unpublished draft report. Montana Natural Heritage Program, Helena.
- Heidel, B. L. and J. S. Shelly. 1997. The effects of fire on *Penstemon lemhiensis* - monitoring establishment report, 1995 and 1996. Unpublished report to the Beaverhead National Forest and the Bureau of Land Management. Montana Natural Heritage Program, Helena. 11 pp. + appendices
- Lesica, P. 1996. Effects of grazing on *Arabis fecunda*. Unpublished report to the Bureau of Land Management. Montana Natural Heritage Program, Helena. 5 pp. + appendices
- Shapley, M. and P. Lesica. 1997. *Howellia aquatilis* (Water Howellia) Pond of the Swan Valley: Conceptual hydrologic models and ecological implications. Unpublished report to U.S. Fish and Wildlife Service. Montana Natural Heritage Program and Conservation Biology Research. 44 pp.
- Vanderhorst, J. 1997. Conservation assessment of sensitive moonworts (*BOTRYCHIUM* subgenus *BOTRYCHIUM*) on the Kootenai National Forest. Montana Natural Heritage Program, Helena. 82 pp. + appendices
- Vanderhorst, J. 1997. Status review of *Clarkia rhomboidea* in Montana. Unpublished report to the Kootenai National Forest. Montana Natural Heritage Program, Helena. 19 pp. + appendices
- Vanderhorst, J., B. L. Heidel, J. Pierce, and S. V. Cooper. 1997. Botanical survey of the Ruby Range, Madison County, Montana. Unpublished report to Bureau of Land Management. Montana Natural Heritage Program, Helena. 47 pp. + appendices

Vascular Plants of Special Concern -- Families

Adoxaceae

Adoxa moschatellina

Apiaceae

Conioselinum scopulorum
Lomatium attenuatum
Lomatium geyeri
Lomatium nuttallii
Orogenia fusiformis
Shoshonea pulvinata
Zizia aurea

Asclepiadaceae

Asclepias incarnata
Asclepias ovalifolia
Asclepias stenophylla

Aspleniaceae

Asplenium trichomanes

Asteraceae

Agoseris lackschewitzii
Antennaria densifolia
Artemisia norvegica var
 saxatilis
Aster frondosus
Aster glaucodes
Balsamorhiza macrophylla
Bidens beckii
Bidens comosa
Chrysothamnus parryi ssp
 montanus
Cirsium brevistylum
Cirsium longistylum
Erigeron asperugineus
Erigeron eatonii ssp *eatonii*
Erigeron evermannii
Erigeron formosissimus var
 viscidus
Erigeron lackschewitzii
Erigeron leiomerus
Erigeron linearis
Eupatorium maculatum
Eupatorium occidentale
Grindelia howellii
Haplopappus aberrans
Haplopappus carthamoides var
 subsquarrosus
Haplopappus macronema var
 macronema
Haplopappus nanus
Haplopappus pygmaeus
Helenium hoopesii
Lagophylla ramosissima
Malacothrix torreyi
Petasites frigidus var *nivalis*
Psilocarphus brevissimus
Saussurea densa
Saussurea weberi
Senecio amplexans
Senecio eremophilus
Senecio pauciflorus
Solidago ptarmicoides

Asteraceae (continued)

Solidago sparsiflora
Sphaeromeria argentea
Stephanomeria spinosa
Taraxacum eriophorum
Townsendia condensata
Townsendia florifer
Townsendia leptotes
Viguiera multiflora

Boraginaceae

Cryptantha fendleri
Cryptantha flavoculata
Cryptantha humilis
Cryptantha scoparia
Mertensia bella
Myosotis verna
Plagiobothrys leptocladus

Brassicaceae

Arabis demissa var *languida*
Arabis fecunda
Arabis lyrata var *kamchatica*
Athysanus pusillus
Braya humilis
Cardamine oligosperma var
 kamtschatica
Draba densifolia
Draba fladnizensis
Draba globosa
Draba macounii
Draba porsildii
Draba ventosa
Halimolobos perplexa var
 lemhiensis
Hutchinsia procumbens
Idahoia scapigera
Lesquerella carinata var
 languida
Lesquerella humilis
Lesquerella lescicii
Lesquerella paysonii
Lesquerella pulchella
Physaria brassicoides
Physaria didymocarpa var
 lanata
Rorippa calycina
Thelypodium paniculatum
Thelypodium sagittatum
Thlaspi parviflorum

Cabombaceae

Brasenia schreberi

Campanulaceae

Downingia laeta
Heterocodon rariflorum
Howellia aquatilis
Lobelia spicata

Capparaceae

Cleome lutea

Caprifoliaceae

Viburnum lentago

Caryophyllaceae

Sagina nivalis
Silene spaldingii
Stellaria crassifolia
Stellaria jamesiana

Celastraceae

Celastrus scandens

Chenopodiaceae

Atriplex truncata
Chenopodium subglabrum
Grayia spinosa
Kochia americana
Suckleya suckleyana

Crossosomataceae

Glossopetalon nevadense

Cyperaceae

Carex amplifolia
Carex chalciolepis
Carex chordorrhiza
Carex comosa
Carex crawei
Carex graviora
Carex incurviformis var
 incurviformis
Carex lenticularis var *dolia*
Carex livida
Carex multicostata
Carex nelsonii
Carex neurophora
Carex norvegica ssp
 inserrulata
Carex norvegica ssp *stevenii*
Carex occidentalis
Carex parryana ssp *idahoia*
Carex paupercula
Carex petricosa
Carex prairea
Carex rostrata
Carex scoparia
Carex stenoptila
Carex sychnocephala
Carex tenuiflora
Carex tinctoria
Carex vaginata
Cyperus acuminatus
Cyperus erythrorhizos
Cyperus rivularis
Cyperus schweinitzii
Eleocharis rostellata
Eriophorum callitrix
Eriophorum gracile
Hemicarpha drummondii
Kobresia macrocarpa
Kobresia simpliciuscula
Scirpus cespitosus
Scirpus heterochaetus

Cyperaceae (continued)

Scirpus hudsonianus
Scirpus pumilus
Scirpus subterminalis

Droseraceae

Drosera anglica
Drosera linearis

Dryopteridaceae

Cystopteris montana
Dryopteris cristata
Polystichum kruckebergii
Polystichum scopulinum

Elatinaceae

Elatine brachysperma
Elatine californica

Ericaceae

Arctostaphylos patula
Kalmia occidentalis
Vaccinium myrtilloides

Fabaceae

Amorpha canescens
Astragalus aretioides
Astragalus barrii
Astragalus ceramicus var *apus*
Astragalus convallarius
Astragalus geyeri
Astragalus grayi
Astragalus molybdenus
Astragalus oregonus
Astragalus racemosus
Astragalus scaphoides
Astragalus terminalis
Dalea enneandra
Dalea villosa
Lathyrus bijugatus
Oxytropis campestris var
 columbiana
Oxytropis deflexa var *foliolosa*
Oxytropis parryi
Oxytropis podocarpa
Psoralea hypogaea
Trifolium cyathiferum
Trifolium eriocephalum
Trifolium gymnocarpon

Fagaceae

Quercus macrocarpa

Fumariaceae

Corydalis sempervirens

Gentianaceae

Centaurium exaltatum
Eustoma grandiflorum
Gentiana glauca
Gentiana prostrata
Gentianella tenella
Gentianopsis macounii

Vascular Plants of Special Concern -- Families

Gentianaceae (continued)

Gentianopsis simplex
Halenia deflexa
Lomatogonium rotatum

Grossulariaceae

Ribes cognatum
Ribes triste

Hydrocharitaceae

Elodea longivaginata
Nama densum
Phacelia incana
Phacelia scopulina
Phacelia thermalis

Juncaceae

Juncus acuminatus
Juncus albescens
Juncus covillei var *covillei*
Juncus covillei var *obtusatus*
Juncus hallii
Juncus triglumis

Juncaginaceae

Lilaea scilloides

Lamiaceae

Agastache cusickii
Satureja douglasii
Wolffia columbiana

Lentibulariaceae

Utricularia intermedia

Liliaceae

Allium acuminatum
Allium columbianum
Allium fibrillum
Allium parvum
Allium simillimum
Calochortus bruneaunis
Maianthemum canadense
Tofieldia pusilla
Veratrum californicum

Loasaceae

Mentzelia montana
Mentzelia nuda
Mentzelia pumila

Lycopodiaceae

Lycopodium dendroideum
Lycopodium inundatum
Lycopodium lagopus
Lycopodium sitchense

Lythraceae

Ammannia coccinea
Rotala ramosior

Malvaceae

Sidalcea oregana
Sphaeralcea munroana

Monotropaceae

Allotropa virgata

Najadaceae

Najas guadalupensis

Nyctaginaceae

Mirabilis hirsuta

Nymphaeaceae

Nymphaea tetragona

Onagraceae

Boisduvalia densiflora
Camissonia andina
Camissonia parvula
Clarkia rhomboidea
Oenothera pallida var *idahoensis*

Ophioglossaceae

Botrychium ascendens
Botrychium campstre
Botrychium crenulatum
Botrychium hesperium
Botrychium lineare
Botrychium minganense
Botrychium montanum
Botrychium paradoxum
Botrychium pedunculatum
Botrychium spathulatum
Ophioglossum pusillum

Orchidaceae

Amerorchis rotundifolia
Cypripedium fasciculatum
Cypripedium parviflorum
Cypripedium passerinum
Epipactis gigantea
Goodyera repens
Liparis loeselii
Spiranthes diluvialis

Papaveraceae

Papaver kluanensis

Poaceae

Agrostis borealis
Calamagrostis tweedyi
Dichanthelium oligosanthos var *scribnerianum*
Elymus flavescens
Elymus innovatus
Festuca vivipara
Phippsia algida
Poa curta
Poa laxa ssp *banffiana*
Sphenopholis intermedia
Sporobolus asper
Sporobolus neglectus
Stipa lettermanii

Polemoniaceae

Collomia tinctoria
Gymnosteris parvula
Ipomopsis congesta ssp *crebrifolia*
Ipomopsis minutiflora
Leptodactylon caespitosum
Phlox andicola
Phlox kelseyi var *missoulensis*

Polygonaceae

Eriogonum caespitosum
Eriogonum salsuginosum
Eriogonum visheri
Koenigia islandica
Polygonum douglasii ssp *austinae*

Pontederiaceae

Heteranthera dubia

Portulacaceae

Claytonia arenicola
Lewisia columbiana var *wallowensis*
Lewisia pygmaea var *nevadensis*

Potamogetonaceae

Potamogeton obtusifolius

Primulaceae

Centunculus minimus
Primula alcalina
Primula incana

Ranunculaceae

Aquilegia brevistyla
Aquilegia formosa
Ranunculus cardiophyllus
Ranunculus gelidus
Ranunculus hyperboreus
Ranunculus jovis
Ranunculus orthorhynchus
Ranunculus pedatifidus
Ranunculus verecundus
Thalictrum alpinum

Rhamnaceae

Ceanothus herbaceus var *pubescens*

Rosaceae

Cercocarpus montanus var *glaber*
Dryas integrifolia
Potentilla brevifolia
Potentilla hyparctica
Potentilla plattensis
Potentilla quinquefolia
Potentilla uniflora
Prunus pumila
Waldsteinia idahoensis

Rubiaceae

Kelloggia galioides

Salicaceae

Salix barrattiana
Salix cascadenensis
Salix serissima
Salix wolfii var *wolfii*

Saxifragaceae

Chrysosplenium tetrandrum
Saxifraga apetalata
Saxifraga hirculus
Saxifraga tempestiva
Sullivantia hapemanii

Scheuchzeriaceae

Scheuchzeria palustris

Scrophulariaceae

Bacopa rotundifolia
Castilleja cervina
Castilleja covilleana
Castilleja exilis
Castilleja gracillima
Euphrasia arctica var *disjuncta*
Gratiola ebracteata
Linaria canadensis
Mimulus breviflorus
Mimulus nanus
Mimulus primuloides
Penstemon angustifolius
Penstemon attenuatus var *militaris*
Penstemon globosus
Penstemon grandiflorus
Penstemon lemhiensis
Penstemon payettensis
Penstemon whippleanus

Selaginellaceae

Selaginella selaginoides

Thelypteridaceae

Thelypteris phegopteris

Violaceae

Viola renifolia

Forest Service Sensitive Plant List

Threatened

Howellia aquatilis

Sensitive

Adoxa moschatellina
Agoseris lackschewitzii
Allium acuminatum
Allium fibrillum
Allotropa virgata
Amerorchis rotundifolia
Antennaria densifolia
Aquilegia brevistyla
Arabis fecunda
Asplenium trichomanes
Astragalus barrii
Astragalus molybdenus
Athysanus pusillus
Balsamorhiza macrophylla
Botrychium ascendens
Botrychium crenulatum
Botrychium hesperium
Botrychium minganense
Botrychium montanum
Botrychium paradoxum
Carex chordorrhiza
Carex livida
Carex parryana ssp *idaho*
Carex paupercula
Castilleja covilleana
Castilleja gracillima
Chrysothamnus parryi ssp
montanus
Clarkia rhomboidea
Cypripedium fasciculatum
Cypripedium parviflorum
Cypripedium passerinum
Drosera linearis
Dryopteris cristata
Elymus innovatus
Epipactis gigantea
Erigeron asperugineus
Erigeron evermannii
Erigeron linearis
Eupatorium occidentale
Gentianopsis simplex
Glossopetalon nevadense
Goodyera repens
Grindelia howellii
Halimolobos perplexa var
lemhiensis
Haplopappus aberrans
Haplopappus macronema var
macronema
Idaho scapigera
Juncus hallii
Kobresia macrocarpa
Lesquerella humilis

Sensitive (continued)

Lesquerella paysonii
Lesquerella pulchella
Liparis loeselii
Lomatium geyeri
Lycopodium inundatum
Mentzelia pumila
Mertensia bella
Mimulus primuloides
Ophioglossum pusillum
Orogenia fusiformis
Oxytropis podocarpa
Penstemon lemhiensis
Phlox kelseyi var *missoulensis*
Polygonum douglasii ssp
austinae
Potamogeton obtusifolius
Ranunculus jovis
Salix barrattiana
Salix wolfii var *wolfii*
Saussurea densa
Saussurea weberi
Saxifraga tempestiva
Scheuchzeria palustris
Scirpus subterminalis
Shoshonea pulvinata
Thalictrum alpinum
Thelypteris phegopteris
Thlaspi parviflorum
Trifolium eriocephalum
Trifolium gymnocarpon
Veratrum californicum
Viola renifolia
Waldsteinia idahoensis

Watch

Carex lenticularis var *dolia*
Erigeron eatonii ssp *eatonii*
Kobresia simpliciuscula
Mentzelia nuda
Penstemon attenuatus var
militaris
Rorippa calycina
Salix serissima
Silene spaldingii
Vaccinium myrtilloides

Proposed Sensitive

Agastache cusickii
Astragalus scaphoides
Botrychium spathulatum
Erigeron lackschewitzii
Eriophorum gracile
Gentianopsis macounii
Halenia deflexa
Petasites frigidus var *nivalis*
Scirpus cespitosus

Bureau of Land Management Sensitive Plant List

Sensitive

Agastache cusickii
Arabis fecunda
Astragalus ceramicus var *apus*
Astragalus scaphoides
Astragalus terminalis
Camissonia andina
Camissonia parvula
Carex crawei
Carex parryana ssp *idaho*
Cryptantha scoparia
Elymus flavescens
Eriogonum salsuginosum
Lesquerella carinata var
languida
Lesquerella lesicii
Lesquerella pulchella
Lomatium attenuatum
Malacothrix torreyi
Nama densum
Oenothera pallida var
idahoensis
Penstemon lemhiensis
Penstemon whippleanus
Quercus macrocarpa
Shoshonea pulvinata
Sphaeromeria argentea
Taraxacum eriophorum
Thalictrum alpinum
Thelypodium paniculatum

Watch

Adoxa moschatellina
Amerorchis rotundifolia
Arabis demissa var *languida*
Asclepias ovalifolia
Asclepias stenophylla
Asplenium trichomanes
Astragalus aretioides
Astragalus barrii
Astragalus convallarius
Astragalus oreganus
Astragalus racemosus
Atriplex truncata
Bacopa rotundifolia
Balsamorhiza macrophylla
Bidens comosa
Carex gravida
Carex multicostata
Carex occidentalis
Castilleja gracillima
Ceanothus herbaceus var
pubescens
Celastrus scandens
Centunculus minimus
Cercocarpus montanus var
glaber
Chenopodium subglabrum
Cleome lutea
Conioselinum scopulorum
Cryptantha fendleri
Cryptantha humilis

Watch (continued)

Cyperus acuminatus
Cyperus schweinitzii
Cypripedium parviflorum
Dalea enneandra
Dalea villosa
Dichanthelium oligosanthes var
scribnerianum
Downingia laeta
Draba globosa
Eleocharis rostellata
Elodea longivaginata
Epipactis gigantea
Erigeron asperugineus
Erigeron formosissimus var
viscidus
Eupatorium maculatum
Eustoma grandiflorum
Gentianopsis simplex
Grayia spinosa
Haplopappus carthamoides var
subsquarrosus
Hutchinsia procumbens
Leptodactylon caespitosum
Lesquerella klausii
Linaria canadensis
Lomatium nuttallii
Lomatogonium rotatum
Lycopodium dendroideum
Mentzelia nuda
Mentzelia pumila
Mirabilis hirsuta
Najas guadalupensis
Penstemon angustifolius
Phacelia incana
Phacelia scopulina
Phacelia thermalis
Phlox andicola
Plagiobothrys leptocladus
Poa curta
Potentilla plattensis
Primula alcalina
Primula incana
Psilocarphus brevissimus
Psoralea hypogaea
Ranunculus cardiophyllus
Ranunculus pedatifidus
Rorippa calycina
Salix serissima
Solidago sparsiflora
Sphenopholis intermedia
Spiranthes diluvialis
Sporobolus asper
Sporobolus neglectus
Stellaria crassifolia
Stellaria jamesiana
Stephanomeria spinosa
Townsendia condensata
Townsendia florifer
Veratrum californicum
Viola renifolia
Wolffia columbiana

Plant Species of Special Concern Survey Form

1997 Revision

MONTANA NATURAL HERITAGE PROGRAM

1515 E. Sixth Avenue, Helena, MT 59620-1800

SCIENTIFIC NAME: _____ DATE OF SURVEY: ____/____/____

OBSERVER(S): _____

WORK LOCATION / ADDRESS: _____

Location: (attach a copy of pertinent 7.5' or 15' topographic map section with locations of populations/subpopulations outlined, one map for each sensitive species described.)

COUNTY: _____ USGS QUAD: _____

TOWNSHIP: _____ RANGE: _____ SEC.(s): _____ ¼ SEC.: _____

ADDITIONAL T/R/S, SECTIONS OR ¼ SEC.: _____

NATL. FOREST DISTRICT/BLM DISTRICT RA/OTHER: _____

DIRECTIONS TO SITE (Refer to towns, roads, trails, other geographic features): _____

Species Autecology

TOTAL NUMBER OF INDIVIDUALS (estimated or exact population count; sum clumps or stems if vegetative): _____

NUMBER OF SUBPOPULATIONS AND SUBTOTALS (if applicable): _____

SIZE OF AREA COVERED BY POPULATION (acres): _____

PHENOLOGY (% flowering, fruiting, vegetative): _____

EVIDENCE OF DISEASE, PREDATION, INJURY: _____

EVIDENCE OF SEED DISPERSAL, ESTABLISHMENT: _____

POPULATION TREND/OTHER COMMENTS: _____

Habitat: (Describe the distinguishing features of the environment on next page, adding landform and the nature of the species' habitat in the setting):

ELEVATION (mean or range): _____ ASPECT: ☐N ☐NE ☐E ☐SE ☐S ☐SW ☐W ☐NW

% SLOPE: _____ SLOPE SHAPE ☐ Concave ☐ Convex ☐ Straight ☐ Other _____

TOPOGRAPHY: ☐ Crest ☐ Upper ☐ Mid ☐ Lower ☐ Bottom ☐ Other _____

MOISTURE: ☐ Dry ☐ Moist ☐ Saturated ☐ Inundated ☐ Seasonal seepage ☐ Other _____

LIGHT EXPOSURE: ☐ Open ☐ Shaded ☐ Partial shade ☐ Other _____

PARENT MATERIAL: _____

SURFACE COVER (TOTAL %): MOSS/LICHEN _____ BASAL VEG. _____ BARE GROUND _____

SOIL TEXTURE/SERIES: _____

CANOPY COVER: TREE (%) _____ SHRUB (%) _____ FORB (%) _____ GRAMINOID (%) _____

PLANT COMMUNITY: (dominant species at present, age and structure notes): _____

CLIMAX VEGETATION (if not above): _____

ADDITIONAL ASSOCIATED PLANTS (include most common, conspicuous, and characteristic spp.): _____

EVIDENCE OF DISTURBANCE: _____

Documentation:

PHOTOGRAPH TAKEN? (if so, indicate photographer and depository): _____

SPECIMEN TAKEN? (if so, list collector, collection #, and repository): _____

IDENTIFICATION (name of person making determination, and/or flora used): _____

ECODATA PLOT NUMBER (attach photocopied data sheets): _____

OTHER DOCUMENTATION OR REFERENCES: _____

Comments: